

SMBJ3V3A

ROHS

600W Surface Mount Transient Voltage Suppressors

Description

The SMBJ3V3A is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Working Voltage:3.3V
Peak Pulse Power: 600W

Features

- ◆ Glass passivated chip
- ◆ 600W peak power capability with a10/1000us waveform, repetitive rate (duty cycle):0.01%
- ◆ Low leakage
- ◆ Uni and Bidirectional unit
- ◆ Excellent clamping capability
- ◆ Very fast response time
- ◆ RoHS compliant
- ◆ IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
- ◆ ESD protection of data lines in accordance with IEC 61000-4-2
- ◆ EFT protection of data lines in accordance with IEC 61000-4-4

Applications

TVS devices are ideal for the protection of I/O interfaces, Vcc bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.



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Mechanical Data

- ◆ Case: Molded plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end except Bipolar
- ◆ Mounting position: Any

Maximum Ratings and Thermal Characteristics (TA =25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000µs waveform	PPP	600	W
Breakdown voltage @ IT = 10mA	VBR	5.2-6.0	V
Working Peak Reverse Voltage	VRWM	3.3	V
Maximum Reverse Leakage @ VRWM	IR	600	µA
Peak pulse current with a 10/1000µs waveform	IPP	75	A
Maximum Clamping Voltage @ IPP	VC	8.0	V
Power dissipation on infinite heatsink at TL = 75°C	PD	5.0	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only	IFSM	100	A
Maximum instantaneous forward voltage at 50A for unidirectional only	VF	3.5	V
Junction and storage temperature range	TJ,TSTG	- 55 to +150	°C
Operating temperature range	TOP	- 40 to +125	°C

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

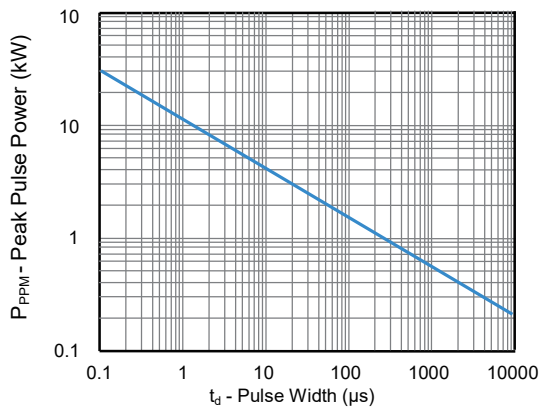


Figure 2 - Pulse Derating Curve

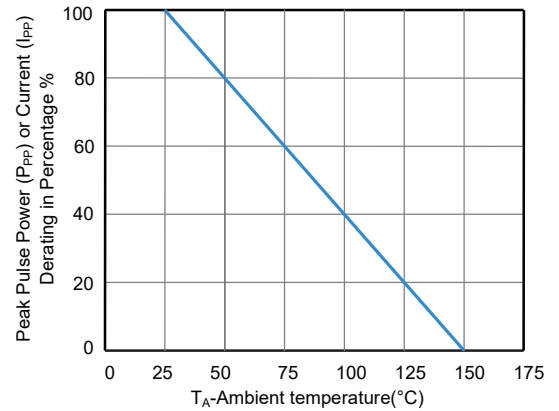


Figure 3 - Pulse Waveform

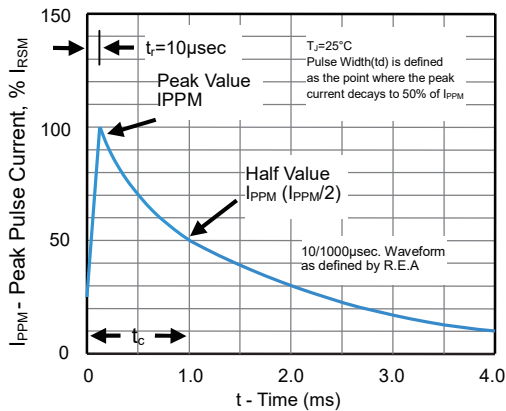


Figure 4 - Typical Junction Capacitance

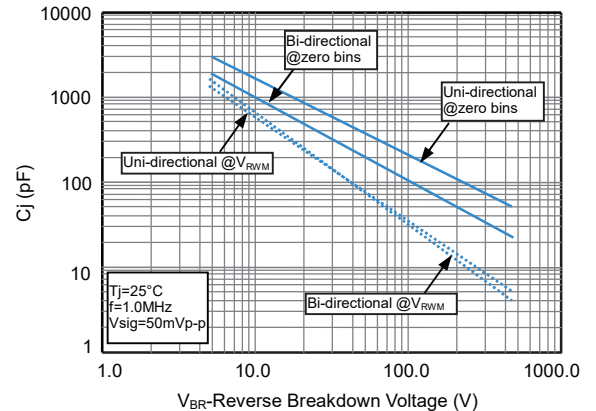


Figure 5 - Steady State Power Derating Curve

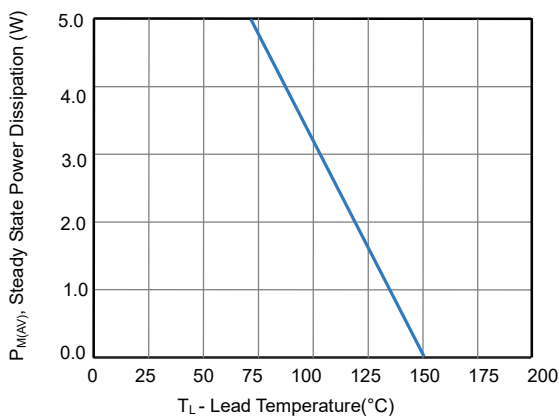
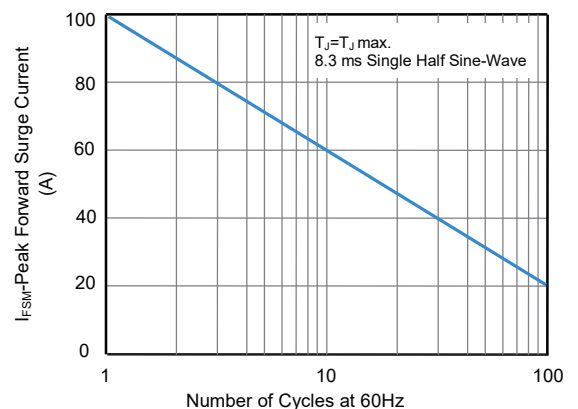
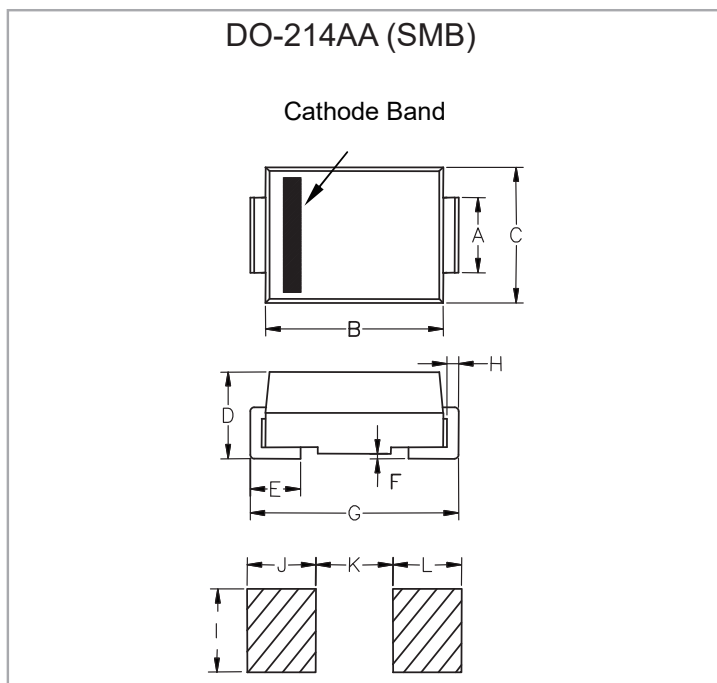


Figure 6 - Maximum Non-Repetitive Surge Current



SMB/ DO-214AA Package Outline Dimensions Unit: inches (millimeters)

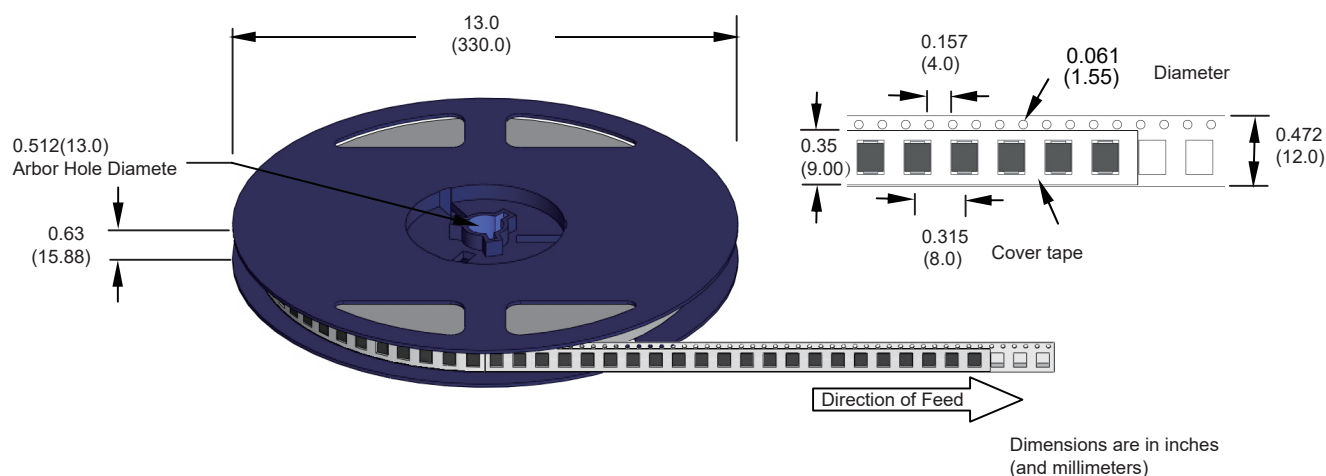


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.077	0.087	1.960	2.200
B	0.171	0.191	4.350	4.850
C	0.130	0.155	3.300	3.940
D	0.084	0.096	2.130	2.440
E	0.030	0.060	0.750	1.520
F	-	0.008	-	0.203
G	0.201	0.216	5.100	5.500
H	0.006	0.012	0.152	0.305
I	0.089	-	2.260	-
J	0.085	-	.160	-
K	-	0.107	-	2.740
L	0.085	-	2.160	-

Ordering Information

Part Number	Component Package	Quantity	Packaging Option	Packaging Specification
SMBJ3V3A	DO-214AA	3000	Tape & Reel -12mm/13"tape	EIA STD RS-481

Tape and Reel Specifications



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